



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

400 Seventh St., S.W.  
Washington, D.C. 20590

JAN 9 2001

DOT-E 8414  
(SIXTH REVISION)

EXPIRATION DATE: December 31, 2002

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Arbel-Fauvet-Rail (AFR), Paris, France  
(U.S. Agent: Mary Hoyt-Joyce,  
Washington, DC)

(See Appendix A to this document for a list of additional grantees)

2. PURPOSE AND LIMITATION:

- a. This exemption authorizes the transportation in commerce of certain Division 2.1 and 2.2 gases in a non-specification intermodal portable tanks. This exemption provides no relief from any Hazardous Materials Regulation (HMR) other than as specifically stated herein.
- b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.315 and 174.63(b).

5. BASIS: This exemption is based on the application of Arbel-Fauvet-Rail dated August 29, 2000 and additional information dated September 18, 2000 submitted in accordance with § 107.109.

JAN 9 2001

Continuation DOT-E 8414 (6th Rev.)

Page 2

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
1-Chloro-1, 1-Difluoroethane or Refrigerant gas, R 142	2.1	UN2517	N/A
Dichlorodifluoromethane or Refrigerant gas, R 12	2.2	UN1028	N/A
1-2-Dichloro-1, 1, 2, 2- Tetrafluoroethane or Refrigerant gas, R 114	2.2	UN1958	N/A
Chlorodifluorobromothane or Refrigerant gas, R 12B1	2.2	UN1974	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification intermodal portable tank mounted in ISO frame, designed and constructed in accordance with Fauvet-Rail drawings CO 166492, CO 166491, CO 166494 technical specifications, and calculations on file with Office of Hazardous Materials Exemptions and Approvals (OHMEA), and in conformance with the following:

(1) Code--Complies with ASME Section VIII Division 1 (not stamped) and IMCO Type 5.

(2) Insulation--None

(3) Water Capacity (U.S. Gallons)--4306

(4) Material--A52 FP steel. Y.P.=53,230 psi,  
T.S.=79,772 psi, and E=22%.

(5) Tank Size (inches)      Diameter X Length X Thickness  
78.74      226.4      0.390

Head Thickness--0.4003 (after forming)  
Weld Joint Efficiency--1.0

(6) Design Pressure (PSIG)--197.3

JAN 9 2001

Note: Design pressure means "maximum allowable working pressure (MAWP)" as used in the ASME Code.

- (7) Test Pressure, Minimum (PSIG)--295.9
- (8) Openings--One 18 inch manway in one head and one 4.7 inch inspection opening in other head; two 4 inch loading/unloading fittings in tank bottom, and one 3 inch safety relief valve pad on the top center of the tank.
- (9) Tank surface area (square feet)--410
- (10) Safety Relief Devices--Two 2-1/2 inch safety relief valves in parallel, both serially mounted outboard of a 3 inch rupture disc all set to function between 197.3 and 217 psig. The total vent capacity is 889,929 SCFH at 217 psig.
- (11) G-Loadings: Vertical down 2; Vertical up 1; Longitudinal 2; and Transverse 1.
- (12) Maximum Gross Weight (pounds)--52,910
- (13) Maximum Commodity Weight (pounds)--40,675
- (14) Tare Weight (pounds)--12,235

b. TESTING -

- (1) Hydrostatic test certificates for each tank must be maintained by the owner or manufacturer at its principal business office and be made available to any representative of the DOT upon request.
- (2) A test report documenting a satisfactory ISO prototype frame test for this tank design must be on file with, and acknowledged by, the OHMEA prior to the first shipment.
- (3) Each tank must be (i) visually inspected prior to each trip to insure that it has not been damaged on the previous trip; and (ii) retested and reinspected once every 5 years in accordance

JAN 9 2001

with the provisions of § 173.32(e) as prescribed for DOT 51 specification portable tanks.

c. OPERATIONAL CONTROLS -

- (1) Each portable tank must be plainly marked on both sides near the middle, in letters at least two inches high on a contrasting background, "DOT-E 8414".
- (2) No product may be shipped that has venting requirements exceeding 889,929 SCFH at 217 psig. The venting capacity required for each product must be determined by the flow formulas contained in Compressed Gas Association (CGA) pamphlet S-1.2.
- (3) The tank must be filled by weight in accordance with the provisions of § 173.315.

8. SPECIAL PROVISIONS:

- a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.
- b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel.

10. MODAL REQUIREMENTS:

- a. A current copy of this exemption must be carried aboard each cargo vessel or or motor vehicle used to transport packages covered by this exemption.
- b. Portable tanks may not be transported in trailer on flatcar (TOFC) service except under conditions approved by the Associate Administrator for Safety, Federal Railroad Administration (FRA). Portable tanks may be

JAN 9 2001

transported in container-on-flatcar (COFC) service only under the following conditions:

- (1) Portable tanks must be equipped to be securely attached to a railcar equipped with an ISO standard COFC basic pedestal system designed for container support and securement;
- (2) Each railcar used to transport portable tanks must be equipped with a cushioning system that meets the requirements of the Association of American Railroads Specification M-952-82; and
- (3) Shipments made under this exemption must be in accordance with § 174.84.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq.

- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS:

- a. The holder of this exemption, as identified in paragraph 1 above, must contact the OHMEA immediately after any of the tanks covered by this exemption are sold to another party.

b. Shippers who ship under the terms of this exemption must report any incident involving loss of contents of the tanks described herein to the Associate Administrator for Hazardous Materials Safety as soon as practicable.

Issued in Washington, D.C.:



*for* Robert A. McGuire  
Associate Administrator for  
Hazardous Materials Safety

JAN 9 2001

(DATE)

Address all inquiries to: Associate Administrator for  
Hazardous Materials Safety, Research and Special Programs  
Administration, Department of Transportation, Washington, D.C.  
20590.  
Attention: DHM-31.

PO: sdc

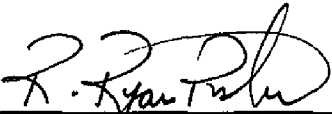
JAN 9 2001

Continuation DOT-E 8414 (6th Rev.) APPENDIX A

Page 7

The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with § 107.107 or § 107.109, as appropriate:

Company Name City/State	Applica- tion Date	Issue Date	Expiration Date
Ermetainer (C.C.R.), Paris, France (U.S. Agent: ERMEWA, Inc. Houston, TX	Aug 28, 2000	JAN 9 2001	Dec 31, 2002



*for* Robert A. McGuire  
Associate Administrator for  
Hazardous Materials Safety